## PERFORMANCE ANALYSIS FOR INDOOR OPTICAL WIRELESS COMMUNICATION SYSTEM

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## ABSTRACT

The worldwide demand for wireless communications is being met in many places by installed single-mode fiber networks. However, there is still a significant "first-mile" problem, which seriously limits the availability of broadband Internet access. Optical wireless communication (OWC) or free-space optical wireless communications (FSO) has emerged as a viable technology for bridging gaps in existing high-data rate communications networks, and as a temporary backbone for rapidly deployable mobile wireless communication infrastructure. FSO is widely regarded as the next generation high-speed wireless communication technology, and due to the security and high data rates is being considered for military systems. This thesis will review the link performance of the indoor optical wireless system. The optical wireless link was modeled and simulated using a commercial optical system simulator named OptSim by RSoft. The availability of simulation tools for FSO systems may help in engineering trade-off and optimization studies, in shortening cost.

## TABLE OF CONTENTS

Title	page
Declaration	iii
Dedication	iv
Acknowledgment	V
Abstract	vi
Table of Content	vii
List of Figure	X.
List of Table	xi
List of Abbreviations	xii

CHAPTER 1	INTRODUCTION			
	1.1	Introduction	1	
	1.2	System Overview	3	
	1.3	Problem Statement	4	
	1.4	Project Objective	4	
	1.5	Scope of Work	4	
	1.6	Organization of the Thesis	5	
CHAPTER 2	HAPTER 2 BASIC CONCEPT AND THEORIES			
	2.1	Introduction	7	
	2.2	The First Mile Problem	8	
	2.3	Indoor Optical Wireless Concept	9	

		2.3.1 Transmitter	11
		2.3.2 Propagation Medium	12
		2.3.3 Receiver	13
	2.4	Eye Safety	13
	2.5	Standard for Indoor Optical Wireless Systems	16
	2.6	System Performance	17
CHAPTER 3	PRO	JECT METHODOLOGY	
	3.1	Introduction	19
	2.0		

3.2	Study the Optical Wireless Communication (OWC)				
	System	20			
3.3	Study the Indoor Link				
3.4	Design Indoor OWC System				
	3.4.1 Light Emitting Diode (LED)	22			
	3.4.2 P-Intrinsic-n (PIN) Photodiode	24			
3.5	Indoor OWC System Simulation for				
	Characteristics Performance	25			
	3.5.1 Bit Error Rate (BER) Tester	25			
	3.5.2 Eye Diagram Analyzer	26			
	3.5.3 Optical Monitor	26			
	3.5.4 Signal Analyzer	27			
3.6	Result Analysis	27			
3.7	Presentation and Thesis Writing 2				
3.8	Conclusions 28				